

# CONTROL CENTER TECHNOLOGY

## MOD CONTROL CENTER AUTOMATED INFORMATION SYSTEMS SECURITY EVOLUTION

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## PURPOSE

- HIGHLIGHT THE ROLE OF THE TECHNOLOGY INFUSION PROCESS IN FUTURE CONTROL CENTER AUTOMATED INFORMATION SYSTEMS (AIS)

# OVERVIEW

- GOALS
- BACKGROUND
- THREAT
- MOD'S AISS PROGRAM
- TQM
- SDLC INTEGRATION
- PAYBACK
- FUTURE CHALLENGES
- BOTTOM LINE

## GOALS

- IMPROVE THE CONFIDENTIALITY, INTEGRITY, & AVAILABILITY OF AIS THROUGH TECHNOLOGY
- EVOLVE AISS TECHNOLOGY THROUGH THE RISK MANAGEMENT PROCESS

# BACKGROUND

## PAST

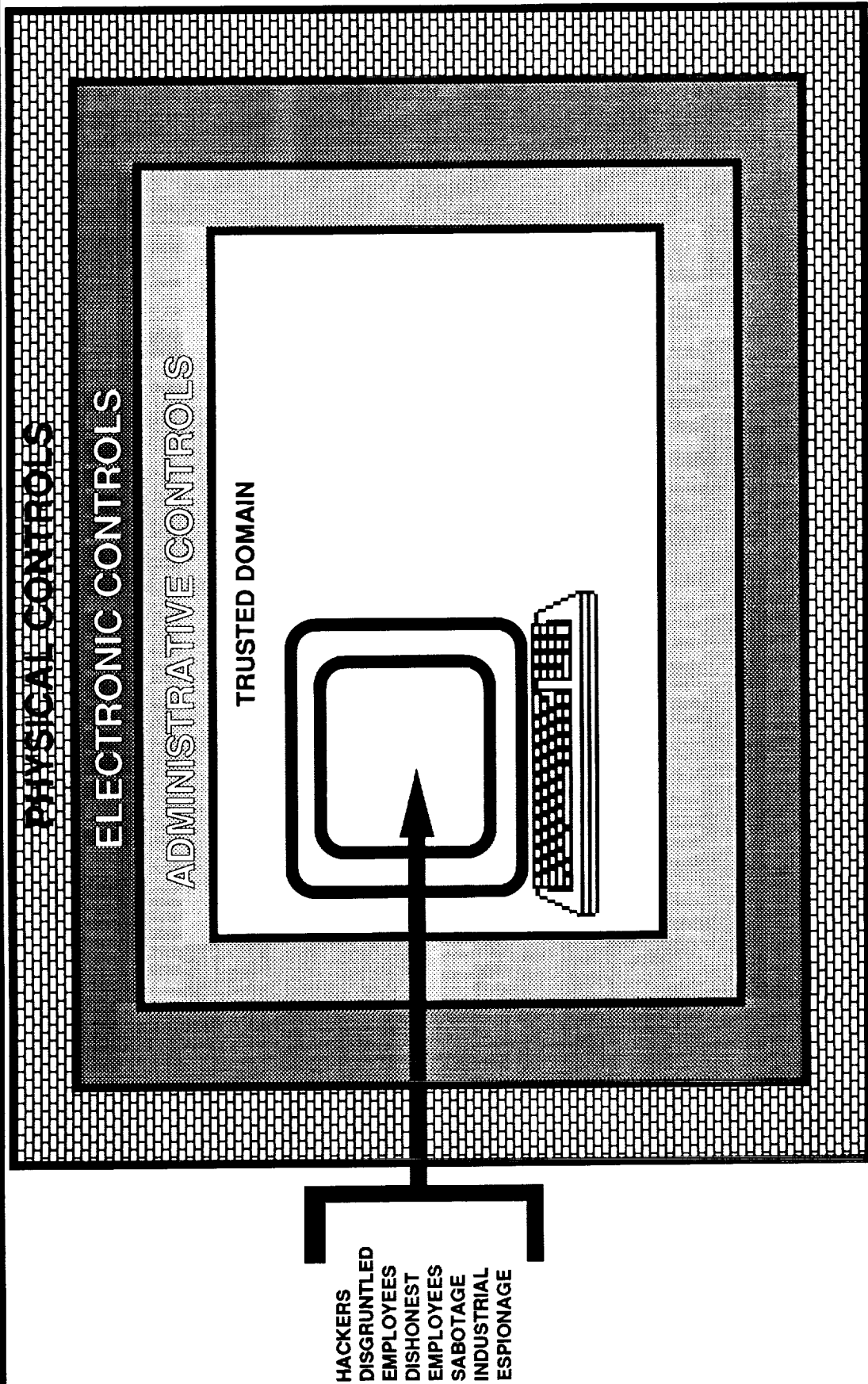
- OUR DOD HERITAGE
  - PROCEDURAL
  - EMPHASIS ON ACCESS CONTROL
  - MANDATORY COMPLIANCE

# BACKGROUND

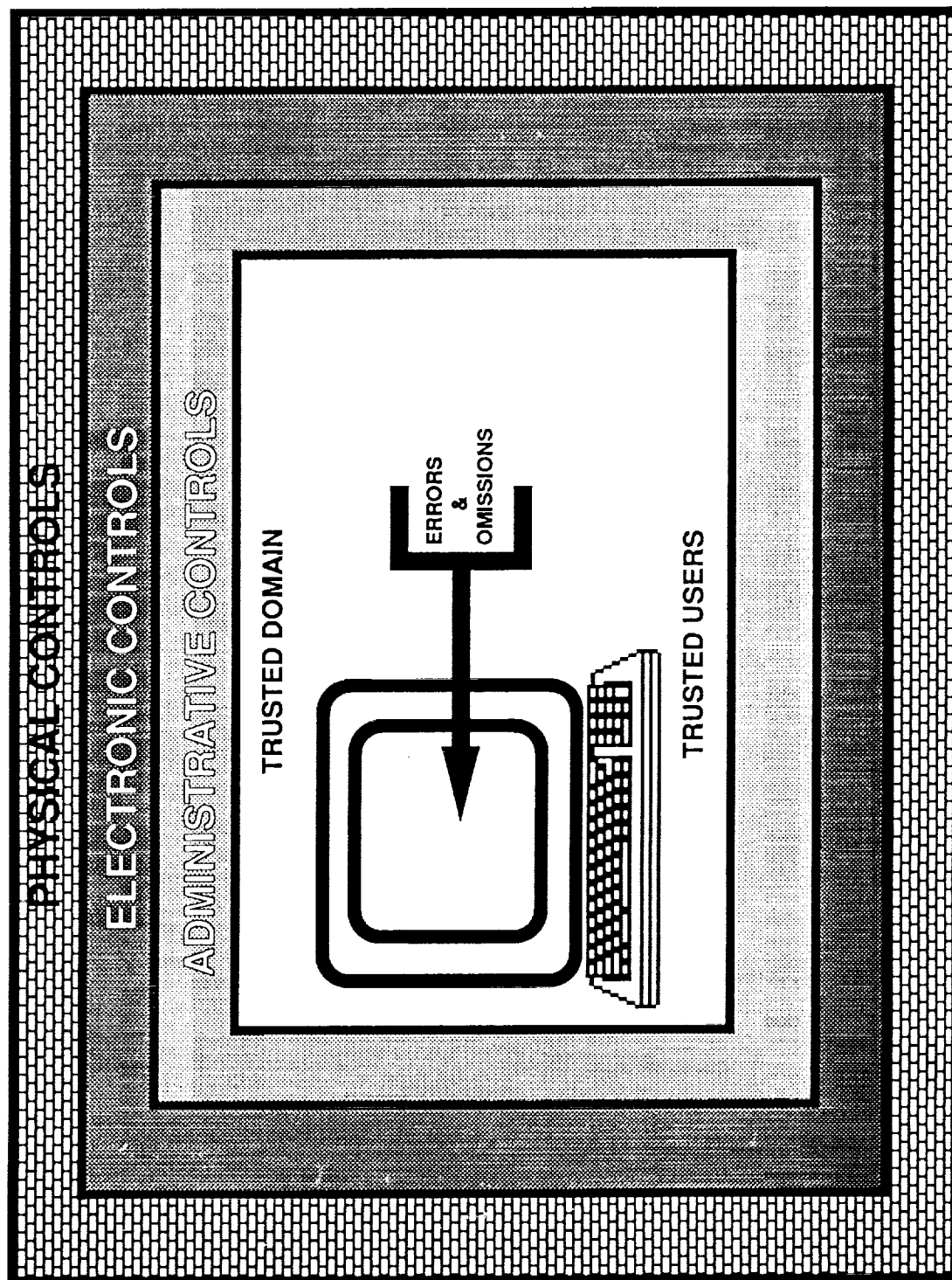
## PRESENT

- MANDATE FOR CONFIDENTIALITY, INTEGRITY, & AVAILABILITY
- COMPUTERS AT RISK
- A NEW PHILOSOPHY
  - NO LONGER COMPLIANCE BASED
  - EMPHASIS ON RISK MANAGEMENT

# EXTERNAL THREAT



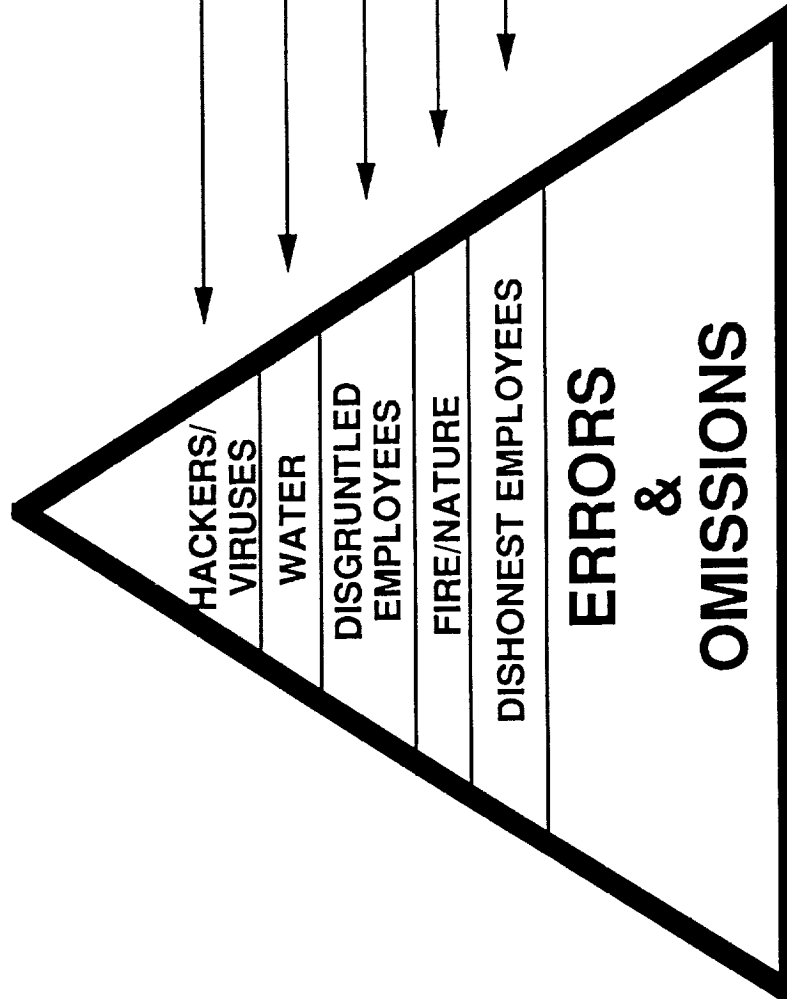
# INTERNAL THREAT





# THREAT ANALYSIS

## THE CHANGING ENVIRONMENT



### INCIDENTS

87	88	89	90	91
	2	2	12	24
1				
	.5			
	.5			
	UNKNOWN TOTAL			

# MOD'S AISS PROGRAM

- POLICY
  - PINK BOOK
- REQUIREMENTS
  - REFERENCE STRUCTURE
- INSTITUTIONALIZATION
  - ASET
  - PROCESSES & PROCEDURES

# POLICY

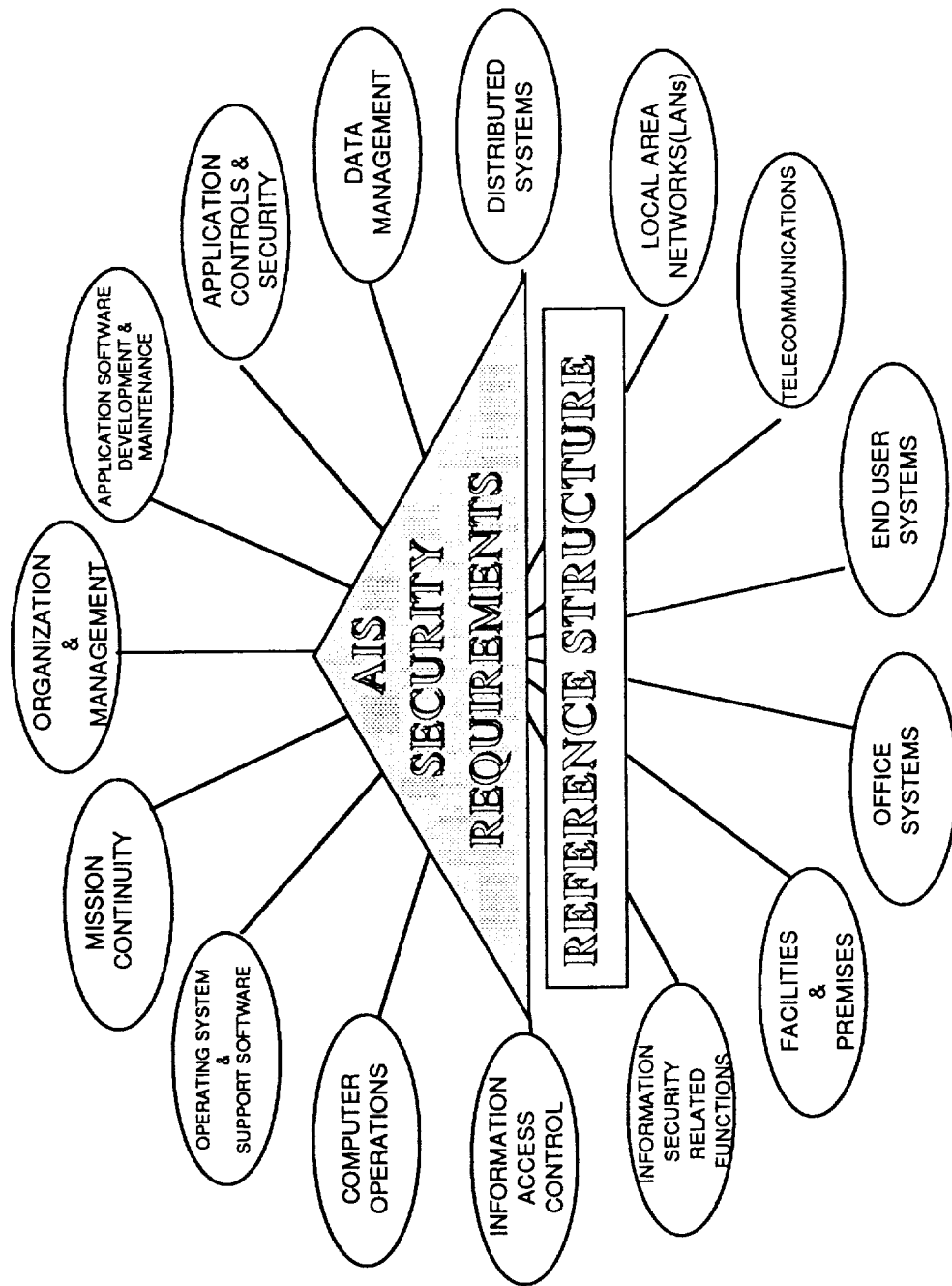
- MOD LEADERSHIP STATEMENT  
24 OCT 90:

*"We want technical, not procedural  
solutions for AIS security!"*

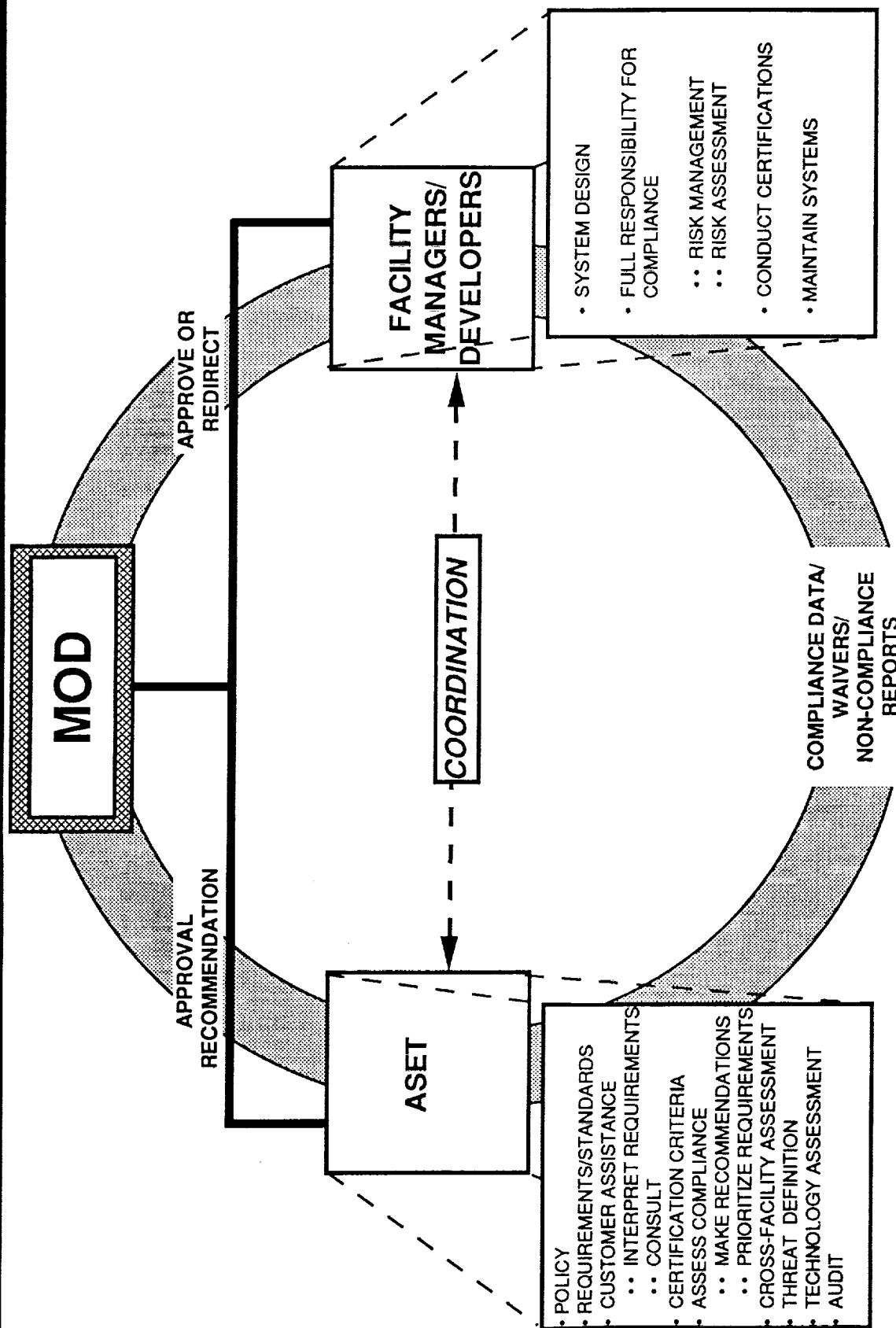
# POLICY

- PINK BOOK
  - ADMINISTRATIVE,  
ELECTRONIC, & PHYSICAL
  - DAY-TO-DAY OPERATIONS
- REFERENCE STRUCTURE  
SPIN-OFF CALLS FOR AISS  
TECHNOLOGY

# REFERENCE STRUCTURE



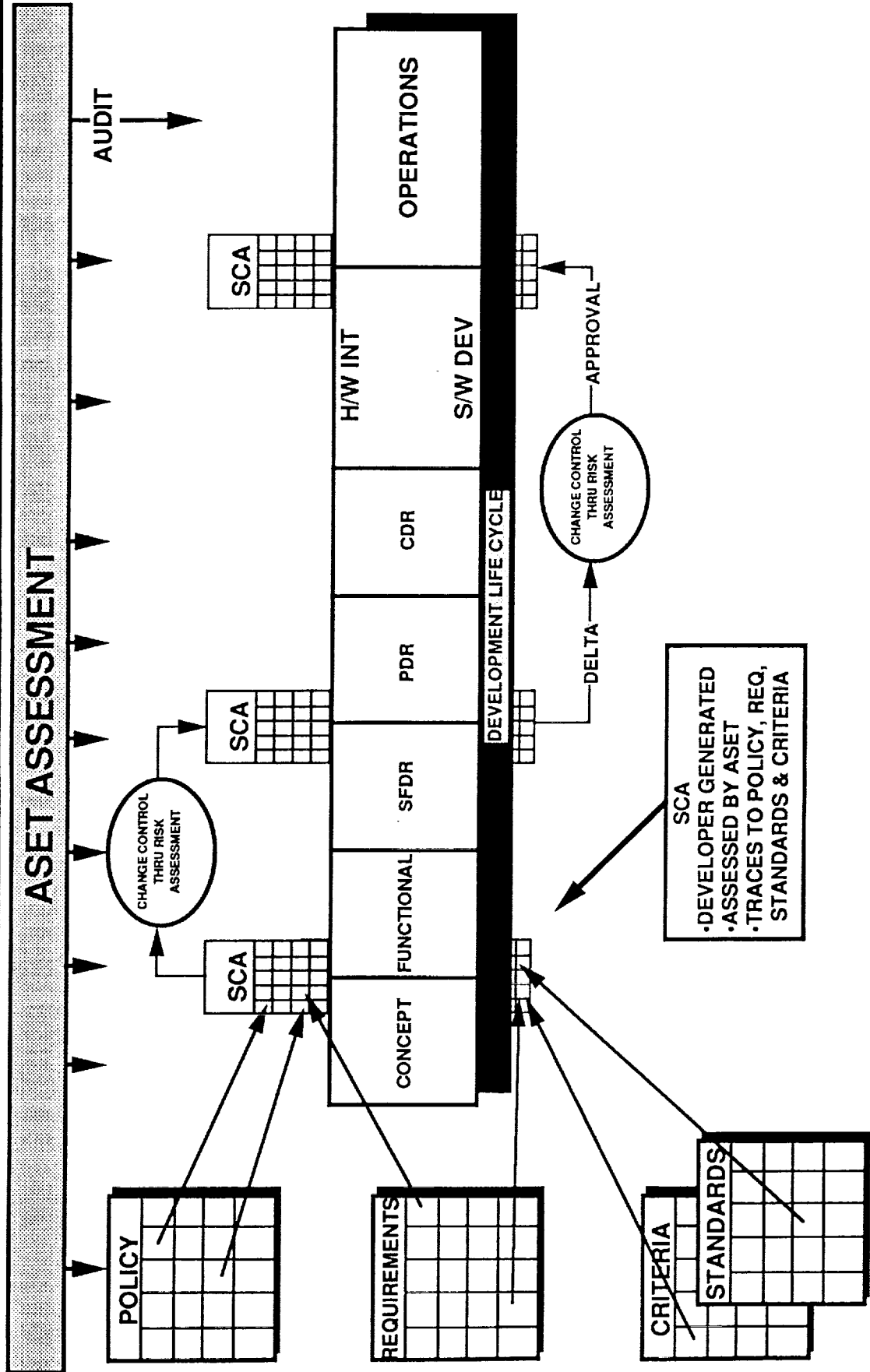
# INSTITUTIONALIZATION



# TQM

- ORIENTATION TO THE ULTIMATE CUSTOMER
- IN CONJUNCTION WITH THE FACILITY MANAGEMENT

# SDLC AISS INTEGRATION





# REAL WORLD

- RETROFIT FOR COMPLIANCE IS COST PROHIBITIVE
- WORKABLE TRANSITION FROM COMPLIANCE TO RISK MANAGEMENT

# CATCH UP

- IN DEVELOPMENT
  - DESIGNED
  - FIXED SCHEDULED
  - APPORTIONED BUDGET
- IN OPERATION
  - MUST NOT IMPACT FLIGHT OPERATIONS
  - MUST REDUCE RISK

# TECHNICAL SOLUTIONS

## EXTERNAL THREAT COUNTERMEASURES

- USER/HOST AUTHENTICATION:  
SMART CARDS
- ELECTRONIC TRANSFER  
VERIFICATION: DIGITAL  
SIGNATURES/ENVELOPES
- SYSTEM REDUNDANCY
- NON-REPUDIATION

# TECHNICAL SOLUTIONS

## INTERNAL THREAT COUNTERMEASURES

- HIGH-LEVEL PROGRAMMING  
LANGUAGES
- SEI METHODS & PROCEDURES
- DATA INTEGRITY TECHNOLOGY

# CONTINUED EVOLUTION

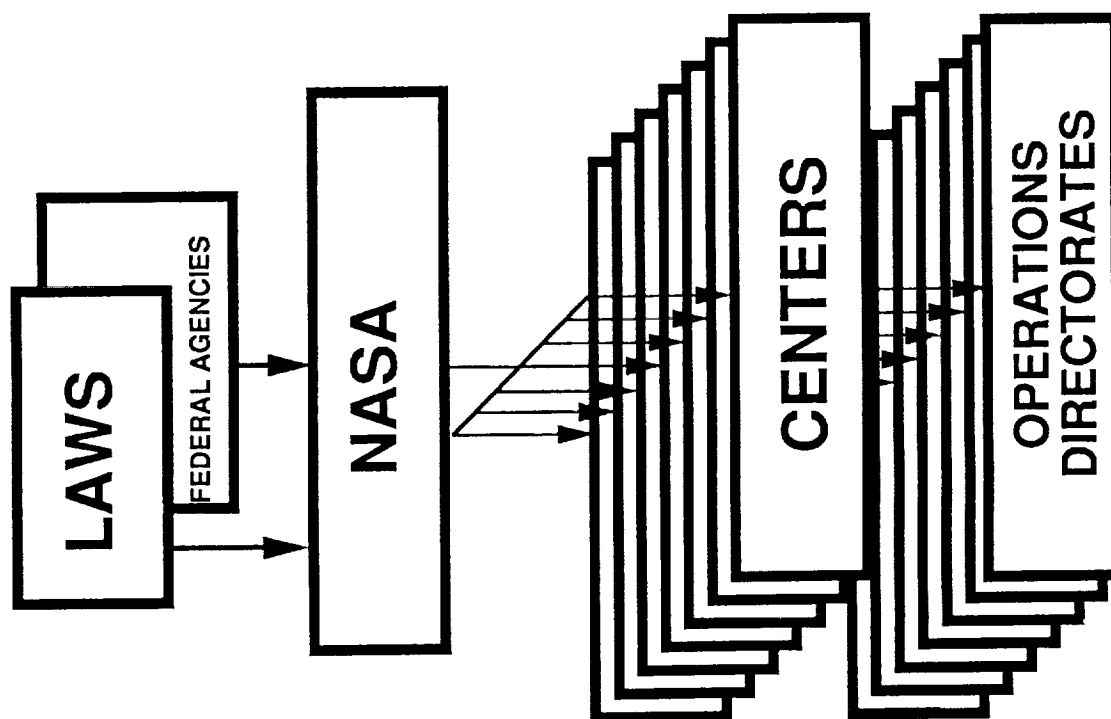
- ANNUAL TECHNOLOGY CONFERENCE
- TECHNOLOGY PROTOTYPING
- TECHNOLOGY ASSESSMENT
- TECHNOLOGY AUDIT

# PAYBACK

- RISK MANAGEMENT
- COST EFFECTIVE
- FIX BIGGEST PROBLEMS
- ALLOWS ACTIVE MANAGEMENT PARTICIPATION IN RISK REDUCTION
- PROVIDES MANAGEMENT AND UNDERSTANDING OF VULNERABILITIES

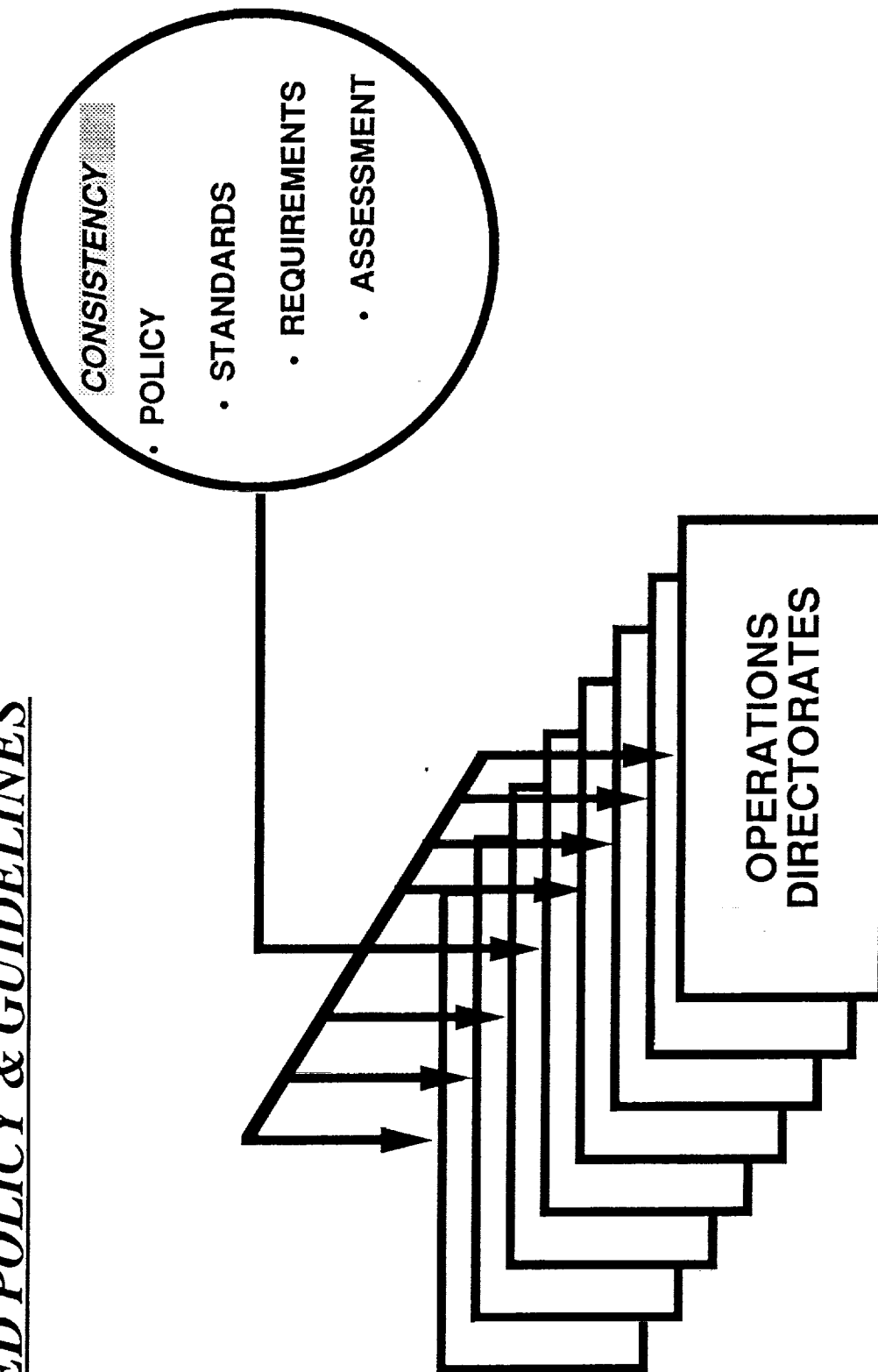
# FUTURE CHALLENGES

# EXISTING POLICIES & GUIDELINES



# FUTURE CHALLENGES

## NEEDED POLICY & GUIDELINES





# BOTTOM LINE

THE KEY TO COST EFFECTIVE AIS  
SECURITY IS THE PROPER  
APPLICATION OF RISK MANAGEMENT  
AND...

TECHNOLOGY

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